REMARKS/ARGUMENTS

Claims 1-35 and 37-50 and new Claims 51-53 are active in the case. Claims 5-8, 11-15, 22-27, 31, 42, 43 and 47-49 stand withdrawn from consideration. Reconsideration is respectfully requested

The present invention relates to compounds that inhibit the activity of transcription factor AP-1.

Claim Amendments

Several claims have been amended to make minor changes thereto which in no way change the scope of the claims.

New Claims 51-53 are supported by Claims 18, 20 and 28. The new claims are narrower than Claims 18, 20 and 28 in that they are limited to a hydroxyl group that is protected.

Since the amendments find full support in the text and the new claims are supported, entry of the amendments and new claims into the record is respectfully requested.

Claim Rejection, 35 USC 112

The Examiner states with respect to Claims 1-4, 30 and 32-24 that the specification does not provide the skilled artisan to make or use the invention as claimed, because the claims describe relationships between atoms of the pharmacophore but do not provide generic structures of compounds that are within the scope of the structure of the pharmacophore. Applicants do not concur that the specification does not adequately describe the subject matter of the claimed invention.

It is, of course, well known that traditionally in reporting product inventions, the inventions are disclosed and claimed in terms of chemical formulae in which commonly a

central nucleus is shown to which is attached a number and variety of functional groups in various positions of the nucleus or core of the molecule. However, recent progress in the fields of genome information, combinatorial chemistry, bioinformatics and structural analysis technologies allow the skilled artisan to specify the target that is required for a medicinal agent to exhibit its efficacy, the chemical structure of the target and the interactions between the target and a given medicinal agent. Given these circumstances, it is not appropriate to express product inventions by the traditional way of claiming a compound as mentioned above. Rather, it is more appropriate for inventors in these fields to disclose their compounds as the present inventors have now done in disclosing their compounds in terms of a pharmacophore, because it is now possible to predict that a group of compounds have the desired efficacy only if, no matter how diverse the core or central nuclei of compounds, the compounds meet certain conditions. In the present case, the invention, in fact, is a pioneering invention in which it is most appropriate for the inventors to identify the structural characteristics of active compounds in the terms that they have done for compounds that function as inhibitors of the activity of transcription factor AP-1.

It is accordingly, to be observed, that the formula of Claims 1-4, 30 and 32-34 expressly in detail show the positions of the atoms N_1, N_2, N_3, N_4 and N_5. Specifically, the symbol N_1 is described in the specification as an atom to which a donative (donatable) hydrogen atom in a hydrogen donating group is bonded or the atom may be an atom in a hydrogen-bond accepting group that forms a bond with hydrogen This description is found at page 42, line 7 to page 43, line 7 of the specification.

The expressions of "donative hydrogen atom in a hydrogen-bond donating group," the "hydrogen-bond accepting atom in a hydrogen bond accepting group" and the "arbitrary carbon atom that constitutes a hydrophobic group," which defines atoms N_2, N_4 and N_5, are well defined on pages 42 and 43 of the text. Moreover, the distances between atoms are

completely and precisely described in the text on pages 23-26. Given this complete and thorough description of the formula containing atoms N_1, N_2, N_3, N_4 and N_5, the compounds that fall within the scope are evident to one of skill, and, indeed, many examples of compounds are provided in the text.

The Examiner asscrts that the specification does not provide reasonable enablement to one of skill in the art for all possible compounds within the scope of applicants' pharmacophore. However, applicants maintain to the contrary that it is possible for one of skill in the art to construct a pharmacophore based on the definitions provided in the specification and as a result arrive at specific compounds that fall within the scope of Claims 1-4, 30 and 32-24. In fact, applicants are the first to clarify the essential feature of a pharmacophore that is suited for inhibiting the activity of transcription factor AP-1. Examples of suitable compounds are stated in Claims 5-28. Claims 1-4, 30 and 32-34 recite the critical fcature in tcrms of a chemical structure that is necessary to inhibit AP-1 activity, which was not known prior to the present invention. Accordingly, the issues raised under 35 USC 112 are believed obviated and withdrawal of the same is respectfully requested.

Prior Art Rejection

Claims 1-4, 9, 10, 16-21, 28-30, 32-41, 44-46 and 50 stand rejected based on 35 USC 103 as obvious over Agback et al, EP 0 150 166. This ground of rejection is respectfully traversed.

The Agback et al reference discloses compounds that have an inhibitory effect on 15-hydroxy-prostaglandin dehydrogenase. Such compounds can be administered to individuals in cases where prostaglandins may function as controlling factors in such conditions as circulatory disorders, cancer, fertility, cell regulation, and the like. By contrast, the presently claimed compounds inhibit the activity of transcription factor AP-1, and therefore are

distinguished over the scope of the compound disclosed in the EP document. Where the compounds disclosed in the EP document are structurally close to the presently claimed compound in its various embodiments, one of skill in the art, considering the disclosure of the reference would have no expectation of what compounds would exhibit an AP-1 activity inhibiting effect. Therefore, applicants maintain that the invention as claimed is unobvious over the disclosure of the EP reference and withdrawal of the prior art rejection is respectfully requested.

New Claims 51-53 are believed clear of the prior art reference.

It is believed that the application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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